C_{TN}(impervious) = average of CLT-1, CLT-2 and ASH-1
= 2.56 mg/L
C_{TN}(pervious) = average of all pervious sites except WIL-2
= 1.80 mg/L
P = 37 inches (average of raingage data from Greensboro, RDU, Monroe, Charlotte, Forest city, and Asheville for 1999-2000 with exclusion of Hurricane Floyd)
Pi = 0.80
Rv = $0.6585\ (Imp/100)^2 + 0.0333\ (Imp/100) + 0.1684$ (7.5)
($R^2 = 0.93$)

By analyzing the annual rainfall data, it was found that the percentages of rainfall events not producing measurable runoff ranged from 2% to 62% with an average of 30%. A conservative estimate of 25% events not producing measurable runoff, Pi = 0.75, provides reasonable fit of the monitoring data, see Figure 7.1. The power-function regression, Eq. 7.5, provides the best estimates of runoff coefficients from imperviousness of the contributing drainage area. Thus, Schueler's Simple Method can be reasonably applied to model the export of TN from roadways based on information derived from the monitoring data.

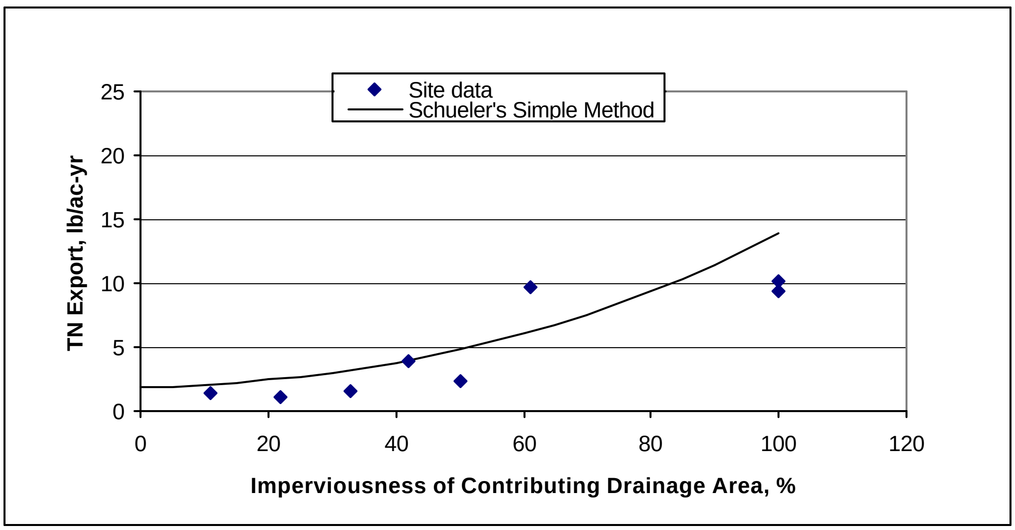

Figure 7.1 Validation of Schueler's Simple Method

7.4 TN Export Functions for Piedmont and Mountains

With the assumption that Schueler's Simple Method has been validated, the TN loads can be estimated by retaining the values of all model parameters except the annual rainfall and Pi. The "P" value was adjusted to 42 inches to be consistent with section 7.1 calculations and representative of the rainfall amount in a normal year. Pi was revised from 0.25 to 0.2 to account for the possible increase in runoff-producing storm events of a normal year. Results of computations are given in Figure 7.2 and Table 7.3. The monitoring data trend is also included in Figure 7.2, as computed by Eq. 7.4. It can be